



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,249	08/17/2001	Yoshinori Sugahara	018656-239	2733

7590 09/20/2005
Platon N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

DIVINE, LUCAS

ART UNIT	PAPER NUMBER
----------	--------------

2624

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,249

Applicant(s)

SUGAHARA, YOSHINORI

Examiner

Lucas Divine

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1 – 12 are pending.

Response to Arguments

2. Applicant's arguments, see remarks, filed 7/1/05, with respect to claim 1 have been fully considered and are persuasive. The 103 rejection of claim 1 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of McIntyre (US 6690478) in view of Tsunekawa (US 5737501) and well known prior art.

Applicant does not specifically refute any limitations previously cited as being taught by McIntyre, but instead refutes the Toda patent and the combination with McIntyre. Therefore, no specific response is given in regards to the retained reference McIntyre.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIntyre (US 6690478) in view of Tsunekawa (US 5737501) and well known prior art.

Regarding claim 1, McIntyre teaches a **print object converter comprising:**

an intermediate data generator (host computer or remote device includes applications for generating application data) **for generating intermediate data** (high level language/application language, col. 3 lines 16-18) **of a print object** (documents, col. 1 lines 15-16 discuss the host computer having high level language for documents – print objects)**to be printed;**

a classification data generator (host computer or remote device includes applications/programs for generating classification data) **for generating an object classification data of the print object** (in order to include high level description information of the object types in print data, the host must generate and provide both the data for printing and the information associated with it – things such as fonts, object types, and other instruction information for printing; col. 4 lines 40-43 teach processing received instructions according to objects defined within its operation table, thus implying that object information is included in instructions) **in parallel with the generation of the intermediate data** (the generation of high level print data happens all at once, for example, a user through an application hits print and the high level print data [including object classifying information] is prepared at the same time and sent out);

a recording device (inherent to receiving and operating on print jobs/instructions is some sort of memory/buffer/cache etc..., most likely in input/output unit 110 or control driver 104) **for saving the intermediate data and the object classification data** (holds the high level instructions and data information from the remote/host device for processing in the printer);

a PDL selector (printer driver 114, Fig. 1, col. 4 lines 15-21; col. 4 lines 28-47, wherein “appropriate” PDL is selected based on object types [e.g. line 39]) **for selecting one PDL from among a plurality of PDLs** (step 308, multiple pdls shown in Fig. 2) **using the object**

Art Unit: 2624

classification data (col. 4 lines 28-47 teach selecting the best personality/pdl based on objects within the high level instructions and data);

a PDL data generator (control driver 104, Fig. 1) **for generating PDL data from the intermediate data in the selected PDL** (col. 4 line 18; col. 5 line 28 both discuss the conversion to PDL data from high level data); **and**

an output device (page manager 120) **for outputting the PDL data to a printer** (page manager 120 controls the output of PDL data from the page memory 118 to the print engine 122; col. 4 lines 55-57).

While McIntyre teaches including classification data in print data, McIntyre doesn't specifically teach that this classification information is in the form of a table or that the printer driver functions are all in the host as one controller.

Tsunekawa teaches classification data in print data that is in the form of a table (Fig. 5, 503 is object management table, discussed col. 8 lines 1-10, col. 8 line 65-col. 9 line 54, and further throughout – basically for faster processing of print data, object management tables are included). Tsunekawa also teaches a receiving buffer (showing that recording device of McIntyre needs to be there to processes incoming data).

It would have been obvious that one way of easily representing classification of object information would have been in a table. The motivation for doing so would have been to provide fast and easy decision in deciding which PDL to use in McIntyre. McIntyre already teaches comparing the received instructions to an operation table of objects in the pdl personalities to decide PDLs (col. 4 line 42). Instead of comparing the data to instruction information, which could take the form of page 1 – font information for page 1 – object types in page 1 – etc – data

Art Unit: 2624

of page 1 – page 2 By putting the object types into a concise table such as Tsunekawa, the comparison and decision steps would be sped up, creating a faster printing environment (col. 8 lines 5-6 – tables provide ‘high speed searching for object information).

Neither of these references specifically teach the selecting and converting to PDL printer driver functions in the host computer.

However, Examiner takes Official Notice that conversion to PDL via a printer driver in a host computer is well known in the prior art.

Therefore it would have been obvious that the printer driver functions of McIntyre and Tsunekawa could have been in the host computer/remote device of McIntyre. The motivation for doing so would have been to allow the printer to have less complexity and therefore less expensive. Further, host systems generally have faster processors etc... that would allow for the selection and conversion to be completed faster. Other motivations for placing printer driver functions in host computers are well known in the art.

Regarding claim 2, which depends from claim 1, McIntyre further teaches a **PDL decision table** (Fig. 2) that in the combined system would be **compared** to the analyzed object data in McIntyre, thus the **object classification table** of Tsunekawa when the systems are combined, to select the appropriate PDL.

Regarding claim 3, which depends from claim 1, McIntyre further teaches **PDL selector selects one PDL from among a plurality of PDLs depending on the operating environment of the computer** (col. 4 line 35 “system state” affects pdl selection – also in step 312 [Fig. 3], after a PDL name is selected, a version must be selected from a plurality of PDLs with different versions [for example 208 of Fig. 2], if a comparable revision of PDL can be determined, the

Art Unit: 2624

latest PDL revision is selected [step 406, Fig. 4], wherein the latest PDL revision depends on the operating environment of the computing device [how up-to-date the operating environment is]; col. 5 lines 58-60 and col. 6 lines 8-10).

Regarding claim 4, the functional elements of apparatus claim 1 perform all of the method steps of method claim 4. Therefore, method claim 4 is rejected for the same reasons of obviousness as stated in the rejection of apparatus claim 1.

Regarding claim 5, which depends from claim 4, the functional elements of apparatus claim 2 perform all of the method steps of method claim 5. Therefore, method claim 5 is rejected for the same reasons of obviousness as stated in the rejection of apparatus claim 2.

Regarding claim 6, which depends from claim 4, the functional elements of apparatus claim 3 perform all of the method steps of method claim 6. Therefore, method claim 6 is rejected for the same reasons of obviousness as stated in the rejection of apparatus claim 3.

Regarding claim 7, the method steps claimed in method claim 4 are the same as the program steps of program (stored on a computer-readable medium) of claim 7. Further, McIntyre teaches that executable instructions to implement the system are stored in program memory 506 (see Fig. 5) and executed by execution unit 502; col. 6 lines 37-40, thus the system can be implemented as program steps. Therefore, the program steps of claim 7 are rejected for the same reasons as stated in the rejection of the method steps in claim 4.

Regarding claim 8, which depends from claim 7, the method steps claimed in method claim 5 are the same as the program steps of program (stored on a computer-readable medium) of claim 8. Therefore, the program steps of claim 8 are rejected for the same reasons as stated in the rejection of the method steps in claim 5.

Regarding claim 11, which depends from claim 7, the method steps claimed in method claim 6 are the same as the program steps of program (stored on a computer-readable medium) of claim 11. Therefore, the program steps of claim 11 are rejected for the same reasons as stated in the rejection of the method steps in claim 6.

Regarding claim 10, which depends from claim 7, Tsunekawa further teaches that **object classification table includes at least one among items of number of text lines, number of bitmap data, number of arcs, number of squares, number of straight lines, number of curves** (Tsunekawa teaches the classification table [Fig. 5, 503] to include numbers of objects, e.g. ID = 0 is the number of an object: characters, lines, and other drawing items).

Regarding claim 9, which depends from claim 8, in the combination of Tsunekawa and McIntyre, the object classification table of Tsunekawa includes the number of objects and the like (see rejection of claim 10), and thus, in order to most properly analyze the data to select the most appropriate PDL, it would have been obvious to one of ordinary skill in the art that the PDL decision table of McIntyre would need to be edited to include such information in order to properly identify the objects within the system. The motivation for doing so would have been to most correctly analyze the incoming print data in the selection of a PDL.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunekawa and McIntyre and well known prior art as applied to claims 7 and 11 above, and further in view of Isoda (US 6249835).

Regarding claim 12, which depends from claim 11, while in the combination of Tsunekawa and McIntyre and well known prior art a most appropriate print data output based the

Art Unit: 2624

current up-to-date version information of printer software, the combination does not specifically teach that the most up-to-date version of the printer software corresponds to the **type of printer** itself.

Isoda teaches preparing print data for output (rasterizing) based on the type of printer that will print the data (Fig. 8 shows the printers with associated rasterizing level for that type of printer; col. 5 lines 5-10).

It would have been obvious to one of ordinary skill in the art that the type of printer would play a roll in the preparing print data for it as taught in Isoda. The motivation for doing so would be to prepare the most correct print data to output the most correct print sheet. In the combined system of Tsunekawa, McIntyre, and Isoda, the system would use the type of printer as added to the comparison in selecting an appropriate PDL for preparing print data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd

A handwritten signature in black ink, appearing to read 'K. Y. Poon', with a stylized flourish at the end.

**KING Y. POON
PRIMARY EXAMINER**